

forest, and the ranges of the two species never overlap. In April the old birds had their families with them, consisting of two young ones. On the higher slopes of Kina Balu this species was decidedly rarer, and I found it frequenting the twisted and moss-covered trunks near the ground, feeding on snails and probably the small frogs which were numerous. The note is not nearly so clear as that of *C. minor*, but is still a feeble attempt at "Ton-ka-kis."]

32. *PLATYSMURUS ATERRIMUS*.

*Platysmurus aterrimus* (T.) ; Salvad. Ucc. Born. p. 279 (1874) ; Sharpe, Cat. B. iii. p. 91 (1877) ; id. Ibis, 1877, p. 20, 1879, p. 251.

*a, b.* ♂ ; *c.* ♀ ad. Benkoka, Sept. 1885.

*d.* ♂ ad. Kina Balu, March 20, 1887.

[Bill and feet black ; iris crimson-lake. Not at all Crow-like in its habits, frequenting the middle growth in the jungle. Sometimes two or three are seen in company. One specimen was procured on Kina Balu at nearly 1000 feet.]

VII.—*Notes on Birds collected by Dr. G. Radde in the Transcaspian Region.* By H. E. DRESSER, F.Z.S.

(Plate V.)

DR. G. RADDE, of Tiflis, has recently sent to me for examination and identification a selection from a collection of birds obtained chiefly by him during his recent journeys in the Transcaspian Region. He purposes to publish a full account of the birds he observed there in the 'Ornis ;' but it may be of interest to the readers of 'The Ibis' to have a few particulars respecting the small selection sent to me, which contains an example of one new species, a most interesting Shrike, and several other birds of interest.

*TURDUS ATRIGULARIS*, Temm.

An adult male (Germab, 4th March) is in very fine plumage, but has the black feathers on the throat slightly edged with white, and an adult female (Askabad, 18th February, 1886)

agrees very closely with examples from Turkestan sent to me by the late Dr. Severtzoff, labelled *Turdus mystacinus*.

*CINCLUS CASHMIRIENSIS*, Gould.

One adult, sex not stated (Schamchor, 5th November), has the underparts nearly similar in coloration to specimens of *Cinclus albicollis* in my collection from Greece, and also to one obtained in the Taurus mountains by Mr. Danford; but I notice that the bill is perceptibly smaller than in any of these specimens.

*SAXICOLA FINSCHI*, Heugl.

One old male in very fine plumage (Krasnovodsk, 6th February), not differing from examples from Asia Minor.

*SAXICOLA DESERTI*, Rüpp.

One adult male (Duschak, 17th March) which belongs to the western form and not to the eastern (*S. montana*), as it has not the white on the inner web of the primaries extending to, or nearly to, the shaft.

*SAXICOLA MORIO*, Ehr.

One adult male (Krasnovodsk, 21st April).

*PRATINCOLA CAPRATA*.

One male adult (Merv, 14th June).

*RUTICILLA PHENICURUS* (Linn.).

One male (Naphtaberg, 14th April), not differing from specimens from Western Europe.

*SYLVIA MYSTACEA*, Ménétr.

Two males (Lenkoran, 22nd March); these examples differ appreciably from the specimens from Palestine which I described and figured in the 'Birds of Europe' (i. p. 407, pl. 63), under the name of *Sylvia momus*, in having the underparts, and especially the throat, richly tinged with vinous pink. They have also a pure white line dividing the vinous on the throat from the black, which extends below the eye, and remind one at the first glance strongly of *Sylvia subalpina*. This white line doubtless suggested Ménétries's name.

*SCOTOCERCA INQUIETA* (Cretzsch.).

One specimen (Chistchitnyar, 10th May), which is very

distinctly streaked with blackish brown and is probably a bird of the previous year.

LUSCINIOLA NEGLECTA, Hume.

One female (Askabad, 27th July).

PHYLLOSCOPUS TRISTIS, Blyth.

One male (Artyk, 27th March), which agrees closely with Indian specimens.

HYPOLAIS RAMA (Sykes).

Two males (Merv, 5th and 10th June), undistinguishable from Indian specimens.

AEDON FAMILIARIS (Ménétr.).

One specimen (Ain Tschindyr, 7th May).

ACROCEPHALUS DUMETORUM, Blyth.

One male (Dusu-olum, 6th May).

LOCUSTELLA LUSCINIOIDES (Savi).

One male (Artyk, 27th March). This specimen shows a slight tendency to striation on the throat, and I at first thought it to be *L. fluviatilis*; but on comparison it proves most certainly to be Savi's Warbler, and is most interesting, as it comes from a locality much further east than any from which this species has hitherto been recorded.

PANURUS BIARMICUS (Linn.).

One male (Ast-ara, S.W. Caspian, on the Persian frontier, 10th April), in immature plumage. Dr. Radde thought it might prove to be new, but it is merely the young of the pale eastern form of the Bearded Reedling (*P. sibiricus*), with the black on the back and wings very clearly defined.

PARUS CINEREUS, Bonn. & Vieill.

One male (Gernab, 4th March), which agrees closely in coloration with the specimens from India, but is rather larger in size, measuring: culmen 0.45, wing 2.82, tail 2.6, tarsus 0.8.

PARUS BOKHARENSIS, Licht.

One female (Tedschen, 20th March), which, though as pale in coloration as the palest of a series of specimens of this

race in my collection, has the wing rather shorter than in the above-mentioned specimen of *P. cinereus*, being otherwise about similar in size. The measurements are: culmen 0·45, wing 2·62, tail 2·7, tarsus 0·8.

*PARUS PHÆNOTUS*, Blanford.

Two males (vicinity of Tiflis, December). The bird from the Caucasus has been treated as a species distinct from the Persian form, and was described by Bogdanoff under the name of *Parus michalowskii*; but a comparison of these two specimens and a female (obtained by Michalowski in the Caucasus, and kindly lent to me by Mr. Seebohm) with the type of *Parus phænotus* in the British Museum convinces me that the two forms cannot possibly be separated, as they are identical in coloration and do not differ in size. These two males measure: culmen 0·48 and 0·5, wing 2·68 and 2·7, tail 2·1 and 2·15, tarsus 0·75 and 0·78.

*SITTA SYRIACA*, Ehrenb.

One male (Puli-chatum, 5th July), a rather pale example of the large eastern form of the Rock Nuthatch.

*MOTACILLA PERSONATA*, Gould.

A male (Askabad, 17th February), agrees closely with fig. 3 in vol. x. Brit. Mus. Cat. of Birds, but has a few white markings on the throat.

*MOTACILLA CITREOLA*, Pall.

A male in full plumage (Molla-kary, 11th April).

*MOTACILLA FLAVA*, Linn.

A male (Artyk, 28th March), with the white eye-streak very closely defined.

*MOTACILLA MELANOCEPHALA*, Licht.

A male (Askabad, Geok-tepi Steppe, 1st March).

*MOTACILLA RAII*, Bp.

A male (Krasnovodsk, 21st April), not differing from specimens from Western Europe.

*LANIUS LAHTORA*, Sykes.

A female (Beum-basch, 1st May), which on comparison I

find to agree closely with specimens in the British Museum labelled *Lanius assimilis*, Brehm, but which I cannot separate specifically from *L. lahtora*.

*LANIUS RADDEI*. (Plate V.)

*Lanius raddei*, Dresser, P. Z. S. 1888, p. 291.

The single specimen of this very distinct little Shrike (Kulkulais, 24th August) was lately exhibited by me and described at a meeting of the Zoological Society of London; but as I then only gave a short diagnosis, it may be advisable to give the following description of this new species:—

Supra canus; dorso pallide fusco cinereo lavato, uropygii lateribus albis; fronte et superciliis albis; linea anguste frontali et loris cum regione oculari et parotica nigris; alis nigricantibus, tectricibus alarum cum secundariis fuscis cinereo marginatis, secundariis majoribus albo anguste terminatis; speculo alari angustiore; rectricibus centralibus nigris, duabus extimis albis, linea centrali nigra versus apicem magis extensa notatis, reliquis nigro notatis; mento, gutture et corpore subtus albis; hypochondriis pallido cervino lavatis. Long. tot. 6·75, culmin. 0·6, al. 3·55, caud. 3·2, tars. 0·9.

This little Shrike may be described as a diminutive Grey Shrike, but it approaches nearest perhaps to *Lanius vittatus*, although it lacks the rich maroon on the back, and the broad frontal band and the chestnut on the flanks. At the same time it shows a tendency to some of these points in having the back washed with brownish grey and the flanks with pale buff.

*MUSCICAPA GRISOLA*, Linn.

One male (Tee-Beum-basch, 1st August), does not differ from west-European specimens.

*MUSCICAPA PARVA*, Bechst.

One male (Molla-kary, 15th April).

*CARDUELIS CANICEPS*, Vig.

One female (Relete-Tehinar, 21st February), not showing any admixture of *Carduelis elegans*.

*COCCOTHRAUSTES CARNEIPES*, Hodgs.

One male (Askabad, 27th July), in somewhat worn plumage.



*PASSER DOMESTICUS* (Linn.).

One adult male (Askabad, 29th May) of the brightly coloured eastern form (*Passer indicus*), not differing from specimens from India and Northern Africa.

*PASSER HISPANIOLENSIS*, Temm.

One adult male (Askabad, 18th February) in winter plumage, closely resembling examples in my collection from Northern Africa and Asia Minor.

*PASSER AMMODENDRI*, Severtzoff.

One adult male (Tedschen, 20th March).

*ERYTHROSPIZA OBSOLETA* (Licht.).

One male (Kelete-Tehinar, 20th February) and one female (Perewallnaja, 10th April), in full plumage.

*EUSPIZA LUTEOLA* (Sparrm.).

One adult male (Hodscha-Kala, 9th May).

*EMBERIZA CIA*, Linn.

One young male (Kopet-dagh, Askabad, 27th July), in first plumage. It is labelled "*Emb. stracheyi*?" but on comparison with specimens in the British Museum there is no doubt that it must be referred to *E. cia* and not to *E. stracheyi*.

*EMBERIZA HORTULANA*, Linn.

One male (Molla-kary, 15th April), not differing in any respect from typical European examples.

*ALAUDA GUTTATA*, Brooks.

One male and one female (Baghyr, 31st March and 15th April), which agree closely with examples of *Alauda guttata* from the Indus valley. One of these is labelled "*Alauda triborhyncha*?" but is certainly not referable to that species, which is larger and more nearly allied to *Alauda arvensis*, whereas *Alauda guttata* is more nearly allied to *Alauda gulgula*.

*AMMOMANES DESERTI* (Licht.).

One female (Takyr Hill, 9th April), in the grey phase of plumage.

*GALERITA CRISTATA* (L.).

One male (Oelstani, 19th June), of the form described by Hume as *G. magna*.

*OTOCORYS PENICILLATA* (Gould).

Two males (Lenkoran, 9th February and 7th December), both of which are undoubtedly referable to true *O. penicillata*.

*OTOCORYS BRANDTI*, Dresser.

One male (Krasnovodsk, 5th February).

*CYPSELUS AFFINIS*, J. E. Gray.

One female (Pulichatum, 5th July), which closely agrees with Indian specimens.

*CAPRIMULGUS ÆGYPTIUS*, Licht.

One male (Karadja-Batyr, 2nd May), labelled *Caprimulgus arenicola*, Severtzoff, which species is, however, not separable from *C. ægyptius*, and the present example agrees closely with one from Egypt.

*PICUS POELZAMI*, Bogd.

Two females (Lenkoran, 21st January and 24th November).

*PICUS LEUCOPTERUS*, Salv.

One female (Tedschen Steppe, 22nd March), agreeing with typical *P. leucopterus* and not referable to the form described by Severtzoff under the name of *Picus leptorhynchus* (cf. 'Ibis,' 1875, p. 489).

*SCOPS BRUCEI* (Hume).

One female (Amu-darya, 10th March), labelled *Scops obsoleta*, Cab. I have compared it with the specimens in the Hume collection in the British Museum, with which it agrees in every respect, and as Hume described it in 1873 ('Stray Feathers,' i. p. 8), his name has priority over that of Cabanis, who described it in 1874 (Journ. für Orn. 1874, p. 126) from specimens in the Berlin Museum obtained by Eversmann in Bokhara and by Ehrenberg in Syria.

*ACCIPITER BADIUS* (Gm.).

One male in fully adult plumage (Astrabad, 24th April), which on comparison with examples of *Accipiter brevipes*

and *A. badius* in my collection I refer without hesitation to the latter species.

*ÆGIALITIS GEOFFROYI* (Wagl.).

One male (Kachka-kala, 15th April), just assuming the breeding-plumage.

*ÆGIALITIS ASIATICA* (Pall.).

One male (Lenkoran, 4th April), in full breeding-plumage.

VIII.—*An Attempt to Diagnose the Suborders of the Ancient Ardeino-Anserine Assemblage of Birds by the aid of Osteological Characters alone.* By HENRY SEEBOHM.

IN my last paper (*Ibis*, 1888, pp. 415–435) I endeavoured to diagnose the suborders of the great Gallino-Gralline group of birds by the aid of their osteological characters alone. I propose in the present essay to attempt to point out the distinguishing osteological features of the suborders of the ancient Ardeino-Anserine assemblage of birds. It is supposed that these two orders (as we may provisionally call them) are separated from each other by a great gulf, the Gallino-Gralline birds being regarded as schizognathous, and the Ardeino-Anserine birds as desmognathous. This distinction is not, however, a very satisfactory one. In the Gallinæ, for example, some of the Cracidæ, when old, become more or less desmognathous by the union of the maxillo-palatines with an ossified nasal septum, a form of desmognathism scarcely distinguishable from that of some of the Vultures and Owls. The narrowness of the line which separates the two orders is further shown by the remarkable similarity of the basipterygoid processes of the Anseres and the Gallinæ. Scarcely less remarkable is the prolongation and recurvation of the mandible behind its articulation with the quadrate, which is very similar in the two groups, though not exclusively confined to them. So close, indeed, are the Anseres to the Gallinæ that it has even been a disputed point (Garrod, *P. Z. S.* 1876, p. 189) to which of them the Palamedeidæ should be referred. It must also be con-



